# THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

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## Maritime Law.

*District Court, S. D., New York. January 29, 1892.*

1. Wharves and Wharfingers—Duty to Dredge.—The city is liable for injury to boats occasioned by its failure to remove at reasonable intervals the accumulations from drains at public wharves to which boats are invited, and at which the city collects wharfage.

2. Same—Duty of Boat at Wharf—Soundings—Inquiries.—It is negligence in a boatman to tie up for the night at a dock without sounding, or inquiry as to the depth of water, or breasting his boat off.

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*District Court, D. New Jersey. February 24, 1892.*

1. Maritime Liens—Repairs—Authority of Charterer.—An owner who allows another to have full possession and management of a vessel, and thus to become the owner for the voyage, pro hac vice, must be presumed to consent that the vessel shall be liable for all repairs necessary to enable her to pursue the voyage, and that the special owner may bind the vessel for this purpose.

2. Same—Advancements at Owners' Request.—A third person, who, at the owner's request, pays for necessary repairs upon a vessel, is entitled to a lien for repayment.

3. Same—Waiver—Delivery of Vessel.—A maritime lien for repairs is in the nature of a proprietary right, and is not lost by merely delivering the vessel to the owner before payment.

4. Same—Waiver—Evidence.—Repairs made upon a foreign vessel were admittedly necessary to enable her to prosecute her voyage. The owner was not a resident of the State, and in making the contract stated that he was then without funds to pay for the repairs. The vessel was to be delivered to him on completion, and he was to pay half the bill 30 days thereafter, and the remainder as the vessel earned the money. The vessel was delivered, but no part of the bill was paid at the expiration of the 30 days. Held that, although the evidence indicated that the repairs were made partly upon the credit of the owner, there was nothing to show an intention to waive the lien.

5. Same—Contract—Evidence.—Where the evidence is conflicting as to whether an oral contract to repair a vessel limited the charge to $700 or $800, the fact that the owner, on receiving a bill $2,100, although criticising it severely, does not repudiate it, but only asks for delay of payment, will be deemed sufficient to show that no such limitation was agreed upon.

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*District Court, D. Maryland. December 4, 1891.*

1. Injury to Employe—Dangerous Appliances—Contributory Negligence.—Libelant, a stevedore, lost his right hand by its being caught between the cogs of a steam-winch, which the court found to be dangerous and unsafe because of the nearness of the steam-valve to the cogs, and of the absence of casing over the cogs to prevent such accidents. Libelant knew the dangerous condition of the winch, and spoke of it to the mate of the vessel, but continued during part of two days to work the winch, unloading cargo out of the steamer's hold. Held, that the fact that libelant continued to work the winch with knowledge of the danger and risk did not of itself, as matter of law, bar his recovery in admiralty, but was evidence merely of contributory negligence on his part.

2. Same—Damages—In Admiralty.—Held that, the libelant's contributory negligence being neither willful, gross, nor inexcusable, and the facts presenting a strong case for his relief, he should be decreed one-half the sum as damages which he would have recovered if he had been without fault.

Morris, J. The libelant was one of a gang of stevedoers employed in unloading a cargo of iron ore in the port of Baltimore. During the progress of the work he was assigned by the head stevedore to the duty of running the forward steam-winch. While engaged at this work, and turning from looking back at the bucket, and having to take hold of the valve wheel, he put out his hand a little too far, and it was caught between the cogs of the driving-wheel, directly in front of him. His hand was so crushed that he has permanently lost the use of it. Three figures have already been amputated, with the probability that the remaining one will have to be taken off, leaving him only an almost useless stump.

The libelant seeks to recover for his injury upon the ground that the winch was dangerous to any one working at it to unload the ship, and that the negligence on the part of the ship-owners in having it in this dangerous condition renders them liable in this suit. The libelant says he had worked at a hundred different winches on steamships, and that in all others the wheel was further from the cogs. He testifies as follows:—

"I thought it was a queer apparatus. I said to the mate, 'You ought to have something over the cog-wheels.' The mate said to me, 'You be a little careful, and it will be all right.' I thought it looked dangerous to run, and thought if I spoke of it to the mate he would put something over the cog-wheels."

The libelant first ran the winch for four hours in the night-time, and the next day had run it for an hour and a half when his hand was caught. He testifies that he could not keep his hand on the valve-wheel and turn his head so as to see the tubes; that he was drawing in the slack chain by reversing the winch, and had turned to watch the tub, and was turning back to the winch to stop off the steam quickly, when, in placing his hand upon the wheel, he put it out a little too far, and it was caught. Another stevedore,—Tracy,—who was also running this winch the night before the accident, testifies that the mitten on his hand was caught in the same way, and taken off his hand. That he mentioned this to the donkey-engine man, in charge, and told him that it ought to have a cover on it; but the man only said, "Be careful."

The difficulty in the case arises from the fact that libelant saw and was aware of the defective construction of the winch, and the danger attending its use. It is contended by the ship-owners that the libelant, in going to work at it, entered upon a contract to work at that particular machine, with full knowledge of its defects, and that, therefore, he cannot recover. I do not think this statement quite fairly gives the substance of the transaction. The libelant, under the foreman of the steve-dores, was employed generally to do any work usually done by steve-dores in unloading a cargo of iron ore from a steamship. He knew nothing of the winch until his turn came to run it. He expected to find such a winch as was usual on such steamships, and reasonably safe. He spoke of its defect to an officer of the ship, but went on with his engagement as a stevedore, and ran it, exercising such care in its use as his duty permitted. This does not seem to me to amount to a contract to work at a defective winch, but rather to be a contract to assist in unloading the ship, with the incident that in the performance of that engagement the libelant continued to use a machine furnished to him which he knew to be dangerous after the employer had declined to alter it. At common law, under such facts, it could scarcely be contended that the libelant was entitled to recover. At common law, if his employer was guilty of negligence in furnishing him with an improper machine not safe to use, then, in knowing it was unsafe, he used it, he was guilty of negligence also, and his contributory negligence would, as a matter of law, has his recovery. In admiralty this is not the rule. Contributory negligence does not of itself necessarily bar recovery, but leaves the court at liberty to apportion the damages upon principles of equity, and to hold the ship-owner liable for part of the employ's pecuniary loss.

The very question of the effect of contributor negligence in a similar action for personal injuries was certified to the supreme court, and, in answering, Mr. Justice Blatchford, speaking for the court, said:—

"Contributory negligence in cases like the present should not wholly bar recovery. There would have been no injury to the libelant but for the fault of the vessel; and while, on the one hand, the court ought not to give him full compensation for his injury, when he himself was partly in fault, it ought not, on the other hand, to be restrained from saying that the fact of his negligence should not deprive him of all recovery of damages. As stated by the district judge in his opinion in the present case, the more equal distribution of justice, the dictates of humanity, the safety of life and limbs and the public good will be best promoted by holding vessel, liable to bear some part of the actual pecuniary loss sustained by a libelant in a case like the present, where their fault is clear, provided the libelant's fault, though evident, is neither willful, nor gross, nor inexcusable, and where other circumstances present a strong case for his relief."

This libelant has, in my judgment, made out such a case. He, a sober, industrious, skillful workman, 33 years of age, has lost his right hand in the service of the owners of this steamship. He has lost it because, notwithstanding his fears with respect to the danger, he consented to use a machine which was a permanent equipment of this ship, and furnished by them as safe and proper for his use, but which, upon the evidence, I find was unsafe and dangerous, and which, it is apparent, could without difficulty have been guarded by them so as to have been safe and suitable. It is not just that the ship-owners should provide such a machine, and throw all the risk of using it upon the unlucky workman who may chance to be injured by it.


STANDARD TECHNICAL BOOKS.

| | Regular Retail Price. | With The Marin Record one Year |
|---|---|---|
| Beeson's Inland Marine Guide | $1.00 | $2.50 |
| Law of Bills of Lading.. | 5.00 | 6.50 |
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## LAKE BOATS ARE NOT LAYING UP.

While the present depression in Lake freights has had a tendency to cause an uneasy feeling among some of our less sanguine ship-owners, it may be comforting in a small degree to know how our English cousins are bearing up under a similar but far more exasperating condition of affairs. Our depression is comparatively of recent, and, we have reason to believe, only temporary existence, while across the Pond they seem to have accepted the situation as a "steady diet," as the report of a recent meeting of the Leith Shipowners' Society says that among other matters under discussion was the prevailing great depression in the shipping business, and the impossibility of obtaining remunerative employment for ships. This depression has now existed for some time, and appears to be increasing, and the meeting was unanimously of opinion that ship-owners, however reluctantly, will shortly have to face the question of a reduction in wages. An evidence of the depression is seen in the increasing number of the steamers which are being laid up both in Leith and at other ports, particularly in the north of England, where reductions of wages have already taken place.

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THE NEW CUNARD LINERS.—We understand that the furnaces for these two vessels will be supplied by the Leeds Forge Co., on Mr. S. Fox's well-known system. This is one of the largest, if not the largest, orders ever placed for a single company.

(ORGANIZED 1880.)

## CLEVELAND VESSEL OWNERS' ASSOCIATION.

(Membership 1892.)

One hundred and sixty-three steamers, and one hundred and forty-four sail and barge, } Aggregating 298,127 tons.

Maintains shipping offices at Cleveland, Ashtabula Harbor, Fairport and Toledo. Regulates wages, protects crews and takes cognizance of all matters in the interest of the members and of the lake commerce generally.

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THE MARINE RECORD.—Official Paper.

## IN CLEVELAND MARINE CIRCLES.

Michael Witty a sailor on board the barge Monitor, fell from a mast yesterday, sustaining severe injuries. He was taken to Lakeside Hospital.

The Gordon-Campbell, the first of the Lake Superior Line steamers, left, on her trip up, last night with a full load of freight. The first passenger steamer will doubtless be the India.

The schooners Hallaran and Pelican have been released

A new firm of vessel brokers and insurance, Jones & Drake, are installed on the second floor of the Perry-Payne building

The well-known ship-broking firm of Benham & Doville has been dissolved. Capt. Benham will continue the business at the old stand, while Capt. Doville will go into business elsewhere, probably in the new Western Reserve building.

At the Globe Ship Yard, work on the steel steamer Mariposa, building for the Minnesota Steamship Co., is well advanced. Her forward deck-houses are on, and she will be ready for launching by the 1st of May. This indispensable ceremony may be deferred for a week though, as her machinery is not quite ready. The light-house steamer Columbine is also making good progress, and will be launched in a couple, or three, weeks. Her sister ship, the Lilac, will be ready for delivery to the Government in about a month. Her furniture, which was manufactured by the company, is about completed, but none has as yet been fitted in the boat. The Anchor Line steamer Schuylkill is nearly all plated up. Work on this boat is being pushed. A number of men have been away from the yard for a fortnight, being engaged in fitting out the various fleets for the season.

Messrs. L. P. & J. A. Smith are very much pleased with the new engine recently placed in the tug S. S. Stone by the Chase Machine Co., of this city. The engine is of the steeple compound type, the cylinders being respectively 14 and 26 inches in diameter, with 20 inch stroke. She has also an 8 by 10 duplex independent condenser. With her old boilers and wheel, the new engine drives the tug along at increased speed with much less than one-half the former consumption of coal.

The engines and machinery are in the steel steamer Andaste, the first of the monitors, at the Cleveland Ship Yard. Her sister ship, the Choctaw, is nearly all plated, and will be launched inside of three weeks. The steel decks of the steamer Spokane are all down, and nearly all riveted. The perennial repairs on the Huntington yacht Nautilus are in progress. The third monitor steamer has not yet been laid down, and will not be, it is understood, until the second has been launched.

There is still a rush of boats at the Shipowners' Dry Dock. The steamer Lansing, which lost her wheel while trying to make Ashtabula Harbor last Thursday night, and sustained other damage, all amounting to about $2,000, is awaiting her turn. The steamer Presley wants some new bottom plank. The dock has been kept almost constantly bury since it was opened.

Word was received at the offices of the Republic Mining Co. yesterday that the steamer Republic had run on the rocks near Topsail Island, and had punched a large hole in her forward compartment. This is the most costly accident of the season so far. The Republic was a flyer last summer, regularly making round trips between Cleveland and Marquette in about five days per trip.

George L. McCurdy. of Chicago, general agent of the Marine Department of the Insurance Co. of North America, and Mr. Burton, of Burton Calbick & Cook, were in the city Tuesday. Mr. McCurdy expressed himself as being highly pleased with the present condition, and future prospects of the insurance situation on the Lakes.

The Hon. Robert P. Porter, of Washington, D, C., Superintendent of the Eleventh Census, will by special invitation of the Cleveland Board of Industry and Improvements, deliver an address at Association Hall on Tuesday Evening, April 26th., at 8 o'clock on the Industrial Status of Cleveland in relation to the traffic on the Great Lakes.

We are pleased to acknowledge receipt of invitation and favors through the courtesy of Wilson M. Day, Secretary and Treasurer.

Mr. A. E. Thompson, the gentlemanly agent of the Crescent Transportation Co. (known last year as Ward's Liner) has had quite a house-warming this week at the new docks and warehouses of the Co. on the west side of the river, oppposite the foot of Superior street. The first boat of the line this season, the steamer John V. Moran, left last night for Duluth.

## CHICAGO MASTERS OBJECT TO THEIR OBITUARIES.

*Special Correspondence to The Marine Record.*

CHICAGO, ILLS.—Capt. Louis Larsen has been appointed to the steambargo Charles Rietz.

The L. M. and L. S. Transportations Co.'s Steamer Peerless, City of Duleth, City of Traverse, Jay Gould and J. L. Hurd, have been put in excellent repair and had their hull saloon cabins and state-rooms repaired and decorated ready for the coming season's business, the company's steamer Jay Gould will commence their season leaving here for Duluth Monday April 25.

Capt. Martin Johnson and Louis Johnson have requested your correspondent to deny the report of their death at Ashtabula of last Saturday as announced in several Chicago daily papers on Sunday and Monday last. I was pleased to meet them both here on Monday morning looking well and hearty. Capt. Louis Johnson will sail the schooner Mediator this season and will go this week with Capt, Oliver Swanson on the schooner Ellen Williams to Naubimway to take charge of the Mediator and bring her to this port.

The steamer Majestic with coal from Buffalo was the first arrived here from the lower lakes this season. She having arrived here Thursday morning April 14th.

The steamer Arctic goes into dry docks for general repairs and new steel arches, 18x⅝

Capt. William Pringle went through here last Thursday to join the steamer Merrimac at Milwaukee.

The Steamer City of Paris arrived here Tuesday afternoon with coal from Buffalo, having made her first round trip this season. She was in collision with the schooner, Dora A. off Big Point Sauble about 10 o'clock Monday night. The schooner was light, bound for Pine Lake. The wind was N. E. and the schooner was by the wind beating down Lake Michigan when the steamer whilst endeavoring to cross her bows collided with her and carried away her stem, jibboom and head gear and caused her to spring a leak. The steamer towed the schooner to Ludington. The steamer received some damage to her stringers and rail on the starboard side. The City of Paris is owned by Cap. J. S. McNeil, who commands her, and others of Bay City and the Cora A. is owned by the Ford River Lumber Co.

The steel steamer Western Reserve, light, arrived here from Buffalo at 3:30 o'clock Tuesday afternoon. She left this port for Buffalo 100,000 bushels of wheat early Wednesday morning April 13th and made her first round trip of this season in 6 days 15 hours.

The fine sloop yacht Atlantic, now owned by J. J. Warde, of the Warde transportation Co. Chicago, will be brought here from Belleville Ont. soon. On her last appearance here some six years ago she won and carried away the Chicago yacht club prize cup then held by the sloop yacht cora. The Atlanta was built by the veteran yacht builders. Capt Cuthbut at Colburg, Ont., who was also the designer of the sloop yacht Druid formerly the Minnie M.

The Chicago Dry Dock Co. have sold their shipyard and dry dock to the Chicago Edison Co. for $90,000. The steamer City of Traverse, which came out of dock last Saturday after receiving new stern bearing and general repairs was the last vessel docked by the C. D. D. Co. The Edison Co. who have also purchased the adjoining land near Harrison street Bridge, for which they paid $100,000 will use the land for building purposes. The Chicago Dry Dock Co. has been an institution of long standing and will be a missing link in the South branch of Chicago river. James Mowatt and James Bates the two well known and much respected "Jims" have been superintendent and foreman for the Co. for a number of years and we wish them success in the future wherever they may be employed.

At Miller Bros. shipyard the steamer Aron was in dry dock for general repairs, the steamer A. D. Hayward for a new "Trout" wheel, the barges Peshtigo and Ogarita are receiving new masts.

Capt. J. M. Melchert has given his schooner Charlotte Raab considerable repairs comprising new bulwarks, and catheads, some outside planking, and recalking, also a new anchor stock, and maingaff.

The steamer Pewaukee, Capt. Simon Christopherson, of Sturgeon Bay arrived here Monday night with lumber from Menominee. During the winter she received a through rebuilt also false sides, increasing her beam 4 feet on each side and increasing her carrying capacity about 150,000 feet of lumber more than before the alteration. Grain freights are quoted at 1¾ cents on wheat, 1½ cents on corn to Buffalo, 1½ cents on oats to Collingwood.

Capt. E. G. Kohnert, formerly of the schooner Medeteranean which was lost last fall was here Tuesday from Bay City where he has been superintending the rebuilding of the schooner Constitution at the Bay City Dry Dock, Capt. Kohnert, has purchased an interest in the Constitution will and command her. She will be consort to the steamer Wilhelm.

"There is a good sized schooner occupying Parson Mushout's corn patch at Manistique" reported Capt. William Lynn, of the steamer Canistoo, Tuesday. "The vessel was driven ashore last fall and abandoned, and since then the seas have carried here 3000 feet further inland, so that she will now interfere with corn planting on Mushout's farm. In order to release her she will have to be raised and launched. There is always lots of sawdust at Manistique, but this spring there are mountains of it. The gales have driven the stuff up on the bluffs until it looms up 30 feet in height, giving the harbor a most strange and picturesque appearance. In 12 feet of water boats have to go through 9 feet of sawdust, and steamers which cannot work sawdust through their exhaust have no business going there."

The big steamship Western Reserve is breaking the record on quick round trips between Chicago and Buffalo. She left here April 13 with over 100,000 bushels of grain and arrived back Tuesday at 3:30 p. m., light, having made the round trip in 6 days, 14½ hours. The Owego must look to her laurels.

The entire corn products of a Kansas county can be carried by one trip by the monster steel steamer, now being built at Detroit for the Eddy-Shaw fleet. She will carry 170,000 bushels of corn without crowding.

Graham and Mortons splendid steel side wheel steamer City of Chicago, has been repainted and redecorated and put in excellent condition for the coming seasons business. She will arrive here next Tuesday from Benton harbor and St. Joseph and commence making daily excursions.

WILLIAMS.

## A NEW ELEVATOR COMPANY ORGANIZED.

*Special Correspondence to The Marine Record.*

BUFFALO, N. Y.—The tug Grace Danford is now in commission again, and is as good as new. The boiler she rolled out last year in Niagara river was never found, and a new one has been given her. It was made by Mr. Riter, measures 7½ feet in diameter by 13 feet in length, and is allowed 140 pounds pressure.

The Central Elevating Company has been organized here and will build an elevator of 1,000,000 or 1,500,000 bushels capacity on the old Sweet property fronting on the Blackwell Canal. The promoters are Charles A. Sweet, W. P. Northrup, Gertrude E. Lee, Simon Freischman, E. P. and C. J. Close. Capital to the amount of $180,000 have been paid in, and this amount will be added to largely, later.

The Harbor Tug Pilots Association now has 66 active members.

Galvin, Mallow & Boland have at last sold for Lane and others of this city the schoonsr Minnehaha, ashore at Detour. J. C. Gilchrist bought her for $21,000, and she is to be delivered in Cleveland at that price.

Rocks, the pet bear of Capt. Fredericks, of the barge Uranus, is dead. The bear lived on the barge all winter and furnished unlimited amusement for the shipkeepers in the Ohio basin. Rocks was poisoned by some one who put "Rough on Rats" in his beer.

The steamer E. C. Pope brought down 118,172 bushels of corn or 3,309 net tons, from Chicago on a little over 14 feet draft. Her cargo overran 152 bushels.

Coal freights to Toledo opened at 25 cents, 15 cents lower than last season's opening. Chicago and Milwaukee rates are dull and unchanged at 40 cents.

Receipts of grain of all kinds at this port, from the opening of navigation, April 20th, were about 4,000,000 bushels.

There has been some trouble already between union and non-union sailors at this port, but, as a rule, the union men are peaceably inclined, and are troublesome generally only when drunk. Police protection was given to the non-union crews of several schooners during the week.

A few loads of flaxseed have been taken for shipment to New York by canal at 4½ cents.

Superintendent Chambers says frost has very seriously impeded work on the Erie Canal, and doubts if the canal can be opened by May 1.

The Chicago grain comes straggling in, and it is just as well that they did not come together, as the Erie and city elevators already have half a dozen boats each waiting turn. Upper lake shippers exhibit the same persistency as last year in consigning nearly all their boats to these two houses.

The stage of water has been very low so far, and several vessels have got aground in the Harbor. In going over the other day the steamer Jim Sheriff got a little

below her course, and got on the reaf near the mouth of the harbor. She was pulled off by a tug, PARKE.

## HEAVY PASSENGER BUSINESS ANTICIPATED.

*Special Correspondence to The Marine Record.*

KINGSTON, ONT.—Patrick Harty, Esq., of Ottawa, Lighthouse Inspector, was in town this week on a business tour. He visited the False Duck's Lighthouse, and placed P. M. Farrington in charge, vice W. H. Lane, who resigned his position after long service. Mr. Harty called on all his Kingston friends, who were very glad to see him hale and hearty, as of old.

Harbor Master McCammon has received instructions from the Marine Department, Ottawa, with reference to the placing of the buoys in the harbor here, which inform him that in future the buoy regulations recommended by the International Congress, which met in Washington, in 1889, are to be adopted, in Canadian waters, with the exception of doing away with mid-channel buoys, the new regulations are very similar to the old ones.

The schooners B. W. Folger and Eliza Fisher are loading coal at Charlotte for Kingston.

Richardson & Sons shipped 140,050 bushels of barley to Montreal this week per Montreal Transportation Co.'s barges.

Captain Mawdesley is in town to take charge of the tug James A. Walker and Captain James McMaugh arrived yesterday from St. Catharines to take charge of the propeller Glengary.

All of our steamers in the harbor are carrying their flags at half-mast out of respect for the late William Edgar, General Agent G. T. Railway, who died at his home in Montreal on Thursday.

The Donnelly S. & W. Co. (ld.) released the schooner Snowbird from the beach in Corsecon bay, where she had lain all winter. It was their first wrecking job of the season, and next week they commence operations on the schooner A. G. Ryan, sunk in the bay of Quinto, near Deseronto.

Your correspondent was invited on Saturday to visit the steamer Islander, of the Thousand Island Steamboat Company, as she lay at the dock with her colors flying, previous to starting for Clayton to commence her season's work on the route between Clayton and Alexandria Bay, in connection with R. W. & O. and N. Y. Central R. R., and although nearly all of our river steamers in this vicinity are kept clean and in good order, we wish to say that without any exception the Islander is the cleanest, neatest and best equipped passenger steamer for river service it has ever been our pleasure to visit. From the keel and floor timbers to the masthead every portion of her hull and outfit was in perfect order, and while paint and varnish had been laid on with good taste to please the eye of the summer tourist, it was a pleasure for practical men to see, that in the case of this steamer, strength and stability had not been neglected. Every portion of the vessel's hull, inside and out, had been well scraped and oiled, and from the limbar chains to the linen in the washrooms, from the hose of the fire-pumps to the hatchet in the life-boat, there could not be found a single fault. The work was done under the direct supervision of Captain Andrew Miller, who will command the steamer this summer, and Mr. Folger, the general manager of the company, assured your correspondent that he was proud of the appearance of the steamer. The other steamers of the Line will commence work on the first of May.

Captain E. A. Booth, Jr., has been given the contract of placing and looking after the buoys in Kingston harbor and vicinity, and has commenced the construction of fifteen new spar buoys, to be placed on the two lower shoals in the harbor. The platform buoys will be at once placed on the Myles, Penitentiary and Bolivar shoals, and the spar buoys on the other shoals as soon as the buoys are made. With these buoys in position, and the range lights lit Kingston harbor ought to be a perfectly safe one for navigators.

Mr. W. A. Geddes and Captain J. V. Trowells, of Toronto, were in town this week, and called to see their numerous friends. The gentlemen predict a very heavy passenger business at Toronto this season, and as they are both in that business, we hope their prodictions will be verified.

The fleet of the Montreal Transportation Company, consisting of the steamers Glengarry and James A. Walker, with consorts Minnedosa, Glenora John Gaskin, Kildonan, Maggie and Bella leave for Port Arthur on Tuesday. They all go up light to load grain for this port.

MAGNET.

## LAKE ONTARIO NAVIGATION.

*Special Correspondence to The Marine Record.*

TORONTO ONT.—Capt. James McMaugh, of the steamer Glengary, and Capt. J. Mawdesley, of the tug Walker, were in the city last week on their way to Kingston to join their steamers.

Capt. William Cavers, of Black Rock, N. Y., was in town last week. He was on his way to West Superior, where he willl take charge of one of the whalebacks being built to run between Gladstone and Buffalo.

Mr. A. W. Hepburn and Capt. O'Brien, of the steamer Empress of India, were in the city on Tuesday arranging for wharfage accommodation for that steamer for the ensuing season. Mr. Hepburn has made many improvements in this steamer during the past winter, consisting of new wheels with feathering buckets, new deck, stanchions and covering board; her cabins have been refurnished, and everything done to meet the increasing demand of the large passenger traffic from this port. The officers of the Empress will be: Captain, George O'Brien; first engineer, R. McCall; purser, J. McCool; steward, Thomas Pickering; and the genial W. H. Smith will look after her business interests ashore.

The name of the schooner Jessie H. Breck has been changed by order in council to that of H. M. Stanley. She will tow with the steam barge Africa. The Africa left here on Tuesday for Buffalo. She will proceed from there to Amherstburg, where she and her consort will load stone for the new Canadian lock at the Soo. Capt. John McNabb, with his mate and wheelsman, have arrived to fit out the S. S. Campana. They will be ready to start about May 15th.

Capt. Mann, of the schooner H. M. Stanley, died very suddenly last week. He was at work fitting out his vessel when he was taken sick, and on being removed to his home died in a few hours. He had only sailed on the lakes for the past three years, having come here from New Carlisle, N. S. He was very highly respected by those who knew him, being of a very quiet unassuming nature, and his sudden death is greatly regretted.

The steamer D. D. Calvin with the schooners Ceylon, Valencia and Norway arrived last week to load timber for Garden Island. After loading to about eleven feet, the depth of water at the Queen's wharf, they had to go outside the harbor where they came to anchor, and completed their cargoes. They left on Wednesday for Garden Island.

The steam barge Armenia also loaded timber for Garden Island. She had a rough trip coming up the lake, heavy head seas were encountered which detained her so much that her supply of coal ran out and she had to return to Kingston for a fresh supply.

Capt. H. W. Jackman has been appointed to the command of the tug Dolphin, succeeding Capt. Frank Jackman Sr. deceased. The Dolphin will be employed at the Government improvements at the Island.

The schooner Grantham, Capt. Thomas Crawford loaded timber and cleared for Kingston.

The Welland Canal opened on Tuesday so that navigation may be said to be fully opened on Lake Ontario.

The schooner Flora Carveth has had an overhauling at the dry dock and cleared for Whitby. The schooner Gleniffer is in dock for caulking.

The following vessels have arrived with coal: Annandale, Jessie Drummond and Lady Macdonald.

The Albacore arrived light from Cobourg, and loaded 20,000 bushels wheat for Kingston at 1½ cents per bushel.

Messrs. Thomas Marks, W. H. Laird, A. Wiley and G. Thomas, of Port Arthur, and W. H. Plummer, of Sault Ste. Marie, are seeking incorporation as the Canadian Steel Barge Co., (limited). The capital stock is to be $128,000, headquarters at Port Arthur.

A despatch from Duluth to the local papers states that Capt. Alex. McDougall will enter patent infringement suits against whale-patterned vessels being built at the Doty ship-yards at Toronto, and also against the straight back building at Cleveland. Mr. Doty states that Capt. McDougall had probably noticed the article in THE MARINE RECORD, in which it stated that the Doty Co. were about to build a steamer after Mr. Redway's designs for Mr. Thomas Marks. Although no contract has as yet been signed still if one should be closed they will build and not infringe any one's patent.

Mr. C. A. Jaques, of the firm of Messrs. G. E. Jaques & Co., of Montreal, was in the city on Tuesday. He left for Hamilton in company of Mr. W. A. Geddes to look after the interests of the Merchant's Line.

Capt. Sandy Irwin and Capt. J. Clifford, residing at St. Catharines, had hard luck last week, when their residence was burnt down and no insurance on either building. We are very sorry to hear of their serious loss.

The steamer Garden City, built by Messrs Doty & Co., was successfully launched from their ship-yard last week. The steamer Lakeside brought a large party of excursionists from St. Catharines to witness the event. All the ceremonies attending the launch passed off in a very happy manner. Miss Daisy Kerr, daughter of the Rev. Mr. Kerr of St Catharines, had the pleasure of performing the christening ceremonies. As soon as this act was performed Mr. J. C. Mathews, president of the company, for whom the steamer was built, ran a large blue ensign bearing the ship's name up at the prow and called for three cheers for the Garden City, and ere these were given with the accompanying "tiger" the vessel was afloat. On account of the low water she had to be launched without her boilers or machinery being in position. These are all ready for her and will be put in at once so that she may be ready for business at the earliest possible date. An interesting event occurred the evening of the launch. Mr. W. E. Redway, designer and builder of the Garden City, being presented with an address and a handsome diamond ring by the employes of the ship yard, to show the high esteem in which he is held by those under his orders.

The steamers of the Niagara Navigation Co. that have for many years taken their departure from Milloy's wharf have made arrangements to run from Geddes wharf in the future, where they will receive increased facilities for handling their large passenger business. This wharf is the favorite with steamboat men trading to Toronto on account of the excellent accommodation afforded their steamers, and the care with which their business interests are looked after, Mr. Geddes being noted for his careful management of all the varied interests with which he has connection.

SPARTA.

## THE CANADIAN CRUISERS.

*Special Correspondence to The Marine Record.*

OTTAWA, P. Q.—As a great many of our lake shipbuilders and mariners are interested in the building of cruisers on the lakes it might interest them to know how the Canadian Government is providing for the Inland Lake Service. In October last year the Polson Iron Co. launched the steamer Constance from their shipyard in Owen Sound. This steamer is 125 feet over all, 19 feet 8 inch beam and 11 feet 3 inch depth of hold, fitted with compound vertical engines with cylinders 18 and 36 by 24 stroke. The boilers are 10 feet 9 inch in diameter by 10 feet 6 inches long, carrying 115 pounds working pressure. Three weeks supply of coal can be carried and the bunkers are so arranged as to afford shot protection for the machinery. She is rigged schooner fashion with a turtle deck and raw-bow, and is fitted with three Nordenfeldt guns. The captain's quarters are forward; the store rooms and magazine room, aft in the lower hold and and the saloon and officers quarters between decks. She is expected to steam 14 knots per hour, easily, and she was built for the Georgian Bay & Lake Huron Service, her steel bottom has been sheeted with three inch elm planking. Some miscalculation was made in the designing of this boat in not making her more beam and when she was launched the builders came very near having a serious wreck on their hands and the hull was so crank that without ballast it would not stand upright. She also drew 10 feet of water nearly instead of eight feet as specified, and as she would not be of service in our shallow waters, the Department of Marine turned her over the Custom's Department and on the 1st of May she will leave Owen Sound for the St. Lawrencs river below Quebec to be employed in watching the whisky smugglers who will be able to keep out of her way by taking many a short cut with their shallow draft boats, which the deep draught revenue cutter cannot follow.

Profiting by this experience the Department of Marine at once contracted with Messers. Polson to furnish another steamer to be used in the Georgian Bay Service. This cruiser No. is 22 feet beam and 10 feet 3 inches depth, but in other respects is of the same dimensions and oufit as the Constance with a much lighter draught of water. Cruiser No. 2 has been launched and is now being fitted for service on our inland waters and will be in commission about the 1st of June. The Polson Co. have also secured the contract for the building of Cruiser No. 3 and have just commenced the construction. This vessel is of about the same general dimensions as the other two and is to be fitted in the same manner. It is intended to use her for the Fisheries Protective Service on the Bay of Fundy, and she will be even more speed than Cruisers 1 and 2. Her engines are direct, acting compound surface, condensing 18 and 38 by 22 stroke with cylidrical boiler 10 feet 9inches by 10 feet 6 inches allowed. a working pressure of 120 pounds of steam. It is expected this steamer will be ready about the end of August, and as the crews of these steamers will all be drilled in navy tactics the little fleet will be well able to watch Canadian interests in the St. Lawrence River and lakes, the length of the vessels allowing them to canal easily up or down the whole system of canals.

Considerable rumor has been going the rounds in this locality about the action of the United States Government in building up the fortifications at Sackett's harbor and Carleton Island, and as it is now understood in Ottawa that the American Government have voted $140,000 to fortify the former place and even a larger amount being contemplated for the erection of defences on the latter Island it is thought by some that the Canadian Government should build better and larger cruisers for our lake service. Strategists say that with Carleton Island well fortified with modern guns, the United States Government would hold the key to the situation and control both channels of the St. Lawrence River, thereby cutting off all communication between river and lakes. Whether there is anything in it or not the posibility of such a thing happening has been brought to the notice of the Canadian Militia Department and is being freely discussed in official circles.

CRUISER.

## THE LIGHTING OF WATERWAYS.

The above important question is attracting wide attention on the lakes as well as both the Atlantic and Pacific Coasts. In a recent editorial note the Maritime Register says:

"There is scarcely a port in the United States that does not show an increase in its transportation business. So great and steady is the growth of this in a large number of places that the movements of vessels cannot be confined to the hours of day light, and the harbors are bright at night with the lights of passing boats. So great is the amount of carriage by water that vessels must now enter and leave our ports by night, and it has therefore become a matter of necessity to mark out the channels in and approaches to our harbors and make the fairways there as well defined by rows of light as are the streets of the cities. That this shall be done at all our ports is not of course imperative. But it must be carried on at the principal places on our sea coasts and the lakes. This has been done to a limited extent at New York, and the success that has attended the attempt here warrants a larger and more extended operation of the plan. A few years ago any such attempt would have been almost impossible owing to an absolute lack of facilities to mark out a channel by lights. Today it is made possible by reason of the Pintsch compressed gas buoy. These lighted buoys really carry out at night the advantages which the buoyage system offers to the navigator in the daylight; and the benefit that would accrue in using them in marking out the fairway at night to outgoing and incoming vessels is at once manifest. They have stood the severe test of long usage. Our own Lighthouse Board has used them with good results for six or seven years, and is now anxious to have more, finding that they are a most excellent addition to the work of the lighthouses and buoys. Fifteen were purchased last year and placed along the New England and the Lake coasts. The lighthouse departments of England, France, Germany and Itsly have used them for a number of years and find them good aids for safe navigation. The advantages that would accrue to our coast navigation from using them in our chief harbors are so great, and the expenses comparatively would be so small, that the Lighthouse Board should give sufficient appropriations to buy more of these lighted buoys. Resolutions have been adopted by the Boards of Trade of Washington, N. C., Charleston, S. C., Brunswick and Savannah, Georgia, and Jacksonville and St. Augustine, Florida, petitioning Congress to make further appropriations for lighting by gas lighted buoys the coast and harbors of the Sixth Lighthouse District in which these cities are situated. The shipping interests and all prominent business houses in these cities have also joined in these petitions. It is to be hoped that Congress will not turn a deaf ear to them for the interests concerned, both human and commercial, represented by the navigation of our harbors need all the protection possible. When, therefore, channels, entrances, etc., are marked with gas-lighted buoys, making navigation by night as easy as by day, then will we have reached as near safety as we can expect.

## COAL RATES ON THE LAKE.

The question of freight rates on coal from the Pittsburgh district to the lakes, and the rates on the Hocking Valley production to the same points has caused no little trouble and discussion in the railroad coal trade. As the time for the opening of lake navigation is about at hand, the question of rates for the coming season came up several weeks since. Numerous conferences were held, but nothing definite was done until this week. At a meeting held here on Tuesday last the officials of the lines interested decided on new rates. During the coming season the rate on coal from Pittsburgh, Hocking Valley and Wheeling creek districts to lake points and to be shipped beyond those points will be 85 cents per ton. Under similar conditions West Virginia coal is to pay $1.02½ per ton to the lake ports.

By this arrangement freight rates on Hocking Valley coal and Pittsburg coal are for the first time put on a level. For the past eight years there has been quite a difference in favor of the Hocking Valley product, and this difference was complained of each season by the Pittsburgh shippers. It was held that this advantage gave the Hocking Valley producers an increase of over 250,000 tons in shipments last season. These figures, however, were disputed by the latter who quoted the figures of the Ohio Coal Traffic Association, showing that the Hocking Valley Tonnages in 1891 fell off 43,000 tons. The statistics reported to have been presented at the meeting referred to, showed that the tonnage of the railroads from the Pittsburgh district last year was 1,183,627. This amount includes only lake shipments. From the Ohio district, 1,564,179 tons were hauled. About 250,000 additional tons were purchased by the Pittsburgh operators in the Ohio district during the miners' strike.

Sentiment in regard to the newly arranged rates seems to be divided. Some of the operators are inclined to believe that rates from the Pittsburgh district to the lakes could have been made lower yet on account of the ore traffic on the return haul. Pittsburgh shippers hold that to overcome the difference made by the new schedule, the Hocking Valley operators need only to make a cut of 5 cents in the market. What was most desired by the Pittsburgh district was a considerably larger reduction in freight rates. But, while the rates as they now stand are not entirely satisfactory to either district interested, it is evident that nothing can be gained by a conflict. Efforts are made to reach an agreement in regard to prices, but it must be confessed that the success so far has been small. The concession granted by the railroads was certainly not great, but the slight advantage it may give coal interests would be entirely lost by anything like a price-cutting policy.—American Manufacturer.

## FROM EAST TO WEST OVER SEA AND LAND.

BY JOSEPH R. OLDHAM, N. A., CLEVELAND, O.

The westbound traveller may step ashore from the Atlantic liner at New York, and within six days he may be treading the streets of San Francisco. The distance between the great eastern and the great western sea ports being 2,830 miles, and the time required to accomplish the distance being 120 hours, the average speed over the whole journey will be equal to 23.6 miles per hour, which is only 3 per cent over the average speed of the fastest Atlantic liners, as the accompanying table will show:

HIGH SPEED STEAMERS.

| | Speed | Length | Breadth | Draft | Displacement | Block Co-efficient | Propeller. Diam. | Propeller. Pitch. | Propeller. Disc. Area. | D²XS3 | I. H.P. | I.H.P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City of Paris | 21,952 | 527.00 | 63.00 | ..... | 12,500 | ..... | ..... | ..... | ..... | ..... | 20,100 | 20,100 |
| Teutonic | 21,540 | 566. | 58.0 | 26.0 | 13,000 | .583 | 19.6 | 28.6 | 600 | 283.6 | 20,700 | 20,700 |
| First Bismarck | 20,100 | 502.5 | 57.5 | 26.0 | 12,900 | .601 | 18.0 | 32.0 | 509 | 255. | 14,321 | 14,321 |
| Etrurea | 20,180 | 500.0 | 57.0 | 22.5 | 9,860 | .530 | ..... | ..... | ..... | 260. | ..... | ..... |
| Edgar | 20,030 | 360.0 | 60.0 | 23.9 | 7,350 | .501 | ..... | 24.4 | ..... | ..... | 12,000 | 12,000 |
| Columbia | 19,770 | 464.00 | ..... | ..... | 10,105 | .550 | ..... | ..... | ..... | 252. | 12,850 | 12,850 |
| La Touraine | 19,500 | 515.6 | 56.0 | 23.0½ | 11,700 | .598 | 19.8 | ..... | 616 | 277. | ..... | ..... |
| Pearl | 19,50 | 265. | ..... | ..... | 2,575 | .535 | ..... | ..... | ..... | ..... | ..... | ..... |
| *Iris | 18,573 | 300.0 | 46.0 | 18.2 | 3,290 | .458 | 16.3½ | 19.11½ | 144 | ..... | 7,714 | 7,714 |
| Stirling Castle | 18.4 | 420.0 | 50.0 | 22.3 | 7,600 | .569 | ..... | ..... | ..... | 183.7 | 8,400 | 8,400 |
| Oregon | 18.3 | 501.0 | 54.2 | 23.8 | 11,000 | .599 | ..... | ..... | ..... | 286.8 | 13,300 | 13,300 |
| | | | | | | | | | | 227.9 | | |

*The first screws fitted were 18.6½ diameter, 18.2 pitch and 194 feet surface and required no less than 32 per cent more indicated horse power to attain the same sped.

It may be said that the underway speed of the train is greater than this, as the locomotive makes many stoppages during its journey, but for the present this cannot be admitted, in connection with this comparison, as many, if not the full number of such stoppages, appear to be inherent to the rapid and continuous progress of the railroad engine, and on the other hand, if the ship could be stopped to coal, to replenish the fresh water supply, and to make little adjustments every twenty-four hours, her motive power could be increased with a decrease of displacement or weight, and thus a greater average speed when under way might be attained, and that with less liability to derangement, for then the vessel, as a whole, might be made much more simple.

Now, to complete this great journey over land, several engines, several fresh engineers and assistants have been engaged, many stoppages have been necessary to replenish the coal supply, to fill the tank with fresh water, and it may be that some halts have been demanded to make good slight defects or derangements in the machinery or boiler. Now, were this latter not so, the much-discussed and contemplated problem of crossing the Atlantic within five days from New York to New Milford might soon pass the missionary stage to assume the realistic, for place, but twenty-five northwestern locomotive boilers, and engines of equal power, and which would not occupy half the space of the boilers only in the "Teutonic," within a fine lined steamer, about 600 feet in length, say sixty feet breadth of beam, and twenty-five feet mean draft of water, and with some thirty-five feet free-board at the stem, then 2,800 miles of ocean could be ploughed through within five days, for each of the said engines, according to Mr. Webb, indicates in ordinary working 1,200 horse-power, and, if we assume to attain as high an efficiency as obtains in the "Majestic," our ideal steamer would have a speed of—or, as engineers express it—she could steam 600 miles per day; by day, of course, the sailor means twenty-four hours.

Now, all this might be just as we could wish it, as foreshadowed above, were it not for that inconvenient ingredient which the chemist denominates calcium sulphate, which forms about 85 per cent. of the deposit usually found as scale in the marine boiler. Of course, with evaporators and large, fresh water tanks, the boilers may generally be kept clean if the oil supplied to the cylinders for lubrication be used very sparingly, but even with nearly pure fresh water, precipitation does take place, and if sea water has to be used, not less than from twenty to thirty tons per day would require to be added as supplementary feed to make up for leakage, waste of steam and water. This sea water contains within itself about 10 per centum of solid matter, such as sulphate of lime. This is the chief reason for the retention of the "Scotch" boiler," which, under ordinary conditione, occupies twice the space of the locomotive boiler of equal power, for the Scotch boiler has not yet been so successfully worked with forced draft as the locomotive has, and the weight of the latter is enormously in excess of the former; for instance, the weight of ordinary boilers to produce the indicated power required for the suppositious steamer would be about 2,000 tons, the weight of locomotive boilers representing an equal power, would not exceed one-fourth the weight. This weight could be largely reduced if the most approved system of forced draft be adopted, for boilers are now being successfully worked with an air pressure equal to fully five-eighth inches of water.

We are all more or less familiar by illustration and otherwise with the destructive work done by railway trains in collision, but it should seem that this work is very trifling in comparison with that which would result from such vessels as the "City of New York" or "Teutonic," coming into collision at full speed, and so; having brought in the locomotive engine and railroad train as a means of comparison with the steamship as to speed, it may be well, before finally leaving the former, to take a further step and compare the living force represented by a large railroad train running at a high speed with the energy of one of the largest and fastest Atlantic steamers. This living force or kinetic energy is computed by multiplying half the weight of the body in pounds by the square of the velocity in feet per second, and dividing the resultant by 32, or, as an equation, the kinetic energy of such a mass in motion may be expressed thus:

$$\frac{\frac{1}{2} M \times V^2}{32}$$

Where M equals the total weight of the ship V equals the velocity in feet per second, and taking 32 as the force of gravity. Proceeding in this way we find that the kinetic energy of a railroad train having a gross weight of 400 tons moving with a velocity of 60 miles per hour, is 108,400,000 foot-poundals, but the kinetic energy of the City of Paris, when steaming twenty knots per hour, is 520,000,000 foot-poundals. Hence, we see that her active or motive energy is nearly five times greater than the heaviest express train when moving at its level best. We see these figures, and they may assist the mind to some extent towards a realization of the disastrous results that would follow from two such vessels as we have named coming into collision end on, but the actual destructive work that such would execute can only be conjectured in a remote degree towards accuracy.

Further, I may say that for a pound of matter in motion the square of the velocity in feet per second is sixty-four times the foot-pounds in its kinetic energy. This also corresponds to the well known law of falling bodies, which is that the square of the velocity is sixty-four times the height. As an illustration, call the Perry-Payne building, Cleveland, O., 100 feet high, then, if one of the elevators fell freely to the basement, its velocity at the moment of impact, would be eighty feet per second, or say fifty knots per hour, thus:

100x64=6400

and the square root of 6400=80.

## MARINE LEGISLATION.

The following resolutions have been submitted to the Senate by Senator McMillan of Michigan and ordered to be printed:

Whereas it is alleged that the iron and steel shipbuilding plants along the Great Lakes of the Northwest exceed in combined facilities, in magnitude and in capital, the interests of all other shipbuilding plants of the country combined; and

Whereas it is further alleged that these great inland shipbuilding interests have been denied an opportunity to bid for the construction of torpedo boats and the smaller class of war ships, which can be taken by the water route through the St. Lawrence to the sea: Therefore,

Resolved, That the Secretary of the Navy be, and he is hereby, directed to inform the Senate whether any bids for the construction of certain types of war ships have been received from any of said shipbuilding companies, and whether such bid or bids have been refused or rejected by his Department for any reason or reasons other than such as follow from the usual rule in accepting or rejecting bids for such class of work, and, if so, the reasons therefor.

That the Secretary of State be, and he is hereby, directed to inform the Senate whether the agreement entered into between the United States and Great Britain in the year eighteen hundred and seventeen, covering the question of the naval force to be maintained by the two governments on the Great Lakes of the United States, is now held to be in force by the Department of State, and what, if any action, has been taken by our Government to revive or put in force the terms of said agreement, and if so, under what authority or action on the part of our Government such agreement has been held to be in force since the giving of the required formal notice by the President to Great Britain in December, eighteen hundred and sixty-four, of a desire on the part of the United States to annul said agreement at the expiration of the six months from the date of said formal notice, and of the ratification of said notice by the act of Congress of February ninth, eighteen hundred and sixty-five.

The Secretary of the Treasury has introduced a recommendation amending the present method of selecting local inspectors, and instead of the judge of the district court, the collector of customs and the supervising inspector centering on a candidate as now, the supervising inspector of the district, who becomes officially responsible for the local inspector after appointment, is recommended to have the principal choice in the personnel of the selection, the other members exercising a judicial authority by certifying to the lawful competency of the candidate only.

H. R. Bill 8121, introduced by Mr. McMillan to secure better protection of the lives of the crews of light-ships, light-house tenders and revenue-marine vesself, asks for the Secretary of the Treasury to be authorized to supply all the above named class of vessels of lakes and coasts with the Coston signals for communication and distress signals.

## BUOYS IN ST. MARY'S RIVER

*Special Correspondence to The Marine Record.*

SAULT STE. MARIE, MICH.—It is a pleasure to announce that the buoys in the St. Mary's River will be placed in position as soon as the ice permits, by patrol boat Pioneer, although the contract for the work does not provide that anything shall be done in this respect until May 1st.

The importance of having the buoys properly placed instead of scattered over the river, as the ice may have left them, is apparent to anyone, and P. M. Church will voluntarily attend to the matter without extra cost to the Government.

The indications are that navigation may be open here on or about the 18th or 20th.

## Notes.

THE steam yacht Bo-Peep, formerly owned by Messrs. Constable & Weatherbee, has been purchased by Mr. E. H. Townsend, of New York City, and will have a new Roberts boiler for the coming season.

THAT is a magnificent commerce and the outlet of a magnificent country which opens the season of navigation with the sailing of a fleet of a hundred great steamers freighted with 6,000,000 bushels of grain, worth not less than $4,000,000. Such was last week's opening of the lake commerce between Chicago and Buffalo. It is a commerce that the world cannot match and never has matched.—Buffalo *Courier*.

A MEETING of the company having the ship railway across the Chignecto isthmus in charge has been held recently in England. The report of a sub-committee of shareholders, appointed some time ago to consider the best means of raising money to complete the line, was received and adopted. The president, Col. Paget Mosley, declared that the present position of the company was entirely owing to the crisis in the English money markets last year, and not attributable to any defect in the works.

THE enterprising Lunkenheimer Brass M'f,g Co. of Cincinnati, Ohio, are preparing for the World's Columbian Exposition a most elaborate display of their popular specialties in valves, sight feed lubricators, oil and grease cups, etc. They will also exhibit a complete line of brass and iron goods, besides some novelties in steam whistles and sight feed lubricators. They report business exceedingly brisk, being crowded with orders for their numerous specialties, and receiving large contracts for special work for United States Cruisers.

CAPTAIN GEORGE L. NORTON, editor of the "Marine Journal", interviewed by the New York Morning Advertiser, states in very positive terms that the "free ship bill" introduced by Mr. Fithian of Illinois would not only do us no good as regards the ocean carrying trade, but would deliberately surrender our coasting commerce. These trenchant and pertinent truths are persistently advocated in the columns of THE MARINE RECORD, and the wholesome fact can not be too firmly driven home, "That Americans can build and equip their own tonnage."

CAPT. MAY, of Quebec, recently appointed commodore of the cruiser Constance, will be in Owen Sound on the 28th inst., when the trial trip will take place. If the trial be satisfactory the vessel will be taken over by the Customs Department on May 1st, and will at once leave for the lower St. Lawrence, where she is to cenise as revenue cutter. In addition to the master, the Constance will be manned by two officers and six seamen, all of wnom are classed as combatants; two engineers, two stokers, a steward and a cook. The Georgian bay cruiser, of which the keel is now being laid by Messrs. Polson, is to be named the Curlew. She will be launched in July.

RECENTLY attention was called to a circular issued by the Marine Department instructing inspectors of steamboats to see that the compasses of vessels were placed in such a position that there would be little or no deviation caused by their close proximity to ironwork. In this connection it may be well to call attention to the fact that the Marine Department has erected at Sutton Point and Coffin Cove, in the bay of Owen Sound, beacons showing the correct magnetic course on the eight cardinal points of the compass. Any ship master, therefore, who takes his ship into the bay can drtermine without any trouble the variations, if any, of his compass. It would be well for mariners, at the opening of navigation, to adjust their compasses in this simple manner.

DAVID KAHNWEILER, of 146 Worth street, New York, in notifying his patrons of a change of address to Nos. 19 and 21 Roosevelt street near Park Row, on or about May 1st, asks all who are about to build, refit, or overhaul, to consult his firm in reference to goods in his line, as it will enable them to select the most desirable and improved appliances approved by the United States Supervising Inspectors of steam vessels. All goods are standard, and, having made a study of this particular business for the past nineteen years, it is their intention to keep up with the times. The large list of vessels that he has fitted out sufficiently attest to the satisfaction that the goods have given. He further states: "I build my own metallic and wooden life boats and life rafts, and manufacture improved life belts, neversink cork jackets, ring buoys, fenders, cork cushions, marine drags, etc. Send for my illustrated catalogue and preserve it for future reference. I shall be pleased to furnish you with estimate on anything you may require, and insure prompt delivery.

### BIDS FOR GOVERNMENT WORK.

The United States Lighthouse Department recently advertised for bids for a properly equipped depot at St. Joseph, Mich., also for furnishing the metal work for a lighthouse at that point. The following is an abstract of the bids received: Henry Collins, Detroit, Mich., $18,532; James Collett, Detroit, Mich., $19,800; Joseph L. Gearing, Detroit, Mich., $21,326; Bushnell & Bushnell, Chicago, Ills., $24,420; D. C. Anderson & Co., Chicago, Ills., $25,576; John Peter Schmitt, Detroit, Mich., $25,637; Byram & Co., Detroit, Mich., $2,565; Russell Wheel & Foundry Co., Detroit, Mich., $2,595; Fulton Iron & Engine Works, Detroit, Mich., $2,881.18; The Cincinnati Architectural Iron Works Co., Cincinnati, Ohio, $2,916.

### SMOKE PREVENTION ON TUG BOATS.

The Chicago Society for the Prevention of Smoke have recently had one of the tug boats of the city equipped with the Western Smoke Preventer Co's device, which consists of a series of steam jets admitted to the fire-box at the boiler. During the official test, which lasted two hours, it is stated that the fact was fairly demonstrated that at least ninety per cent. of the smoke produced by the tug boats could be prevented. A great many supposed objections and difficulties were brought up by the tug owners and managers, none of which, however, have presented themselves in the application of the same principle to fire-boxes used in other service.

Commenting on the above question the *Inter Ocean* says: "A great deal has been gained now that the owners of tug boats are experimenting with smoke consuming apparatus. The river trade is of such great importance to Chicago as to make almost any inconvenience tolerable in preferance to diminution of such a wealth producing industry. But it is desirable that the city should enjoy all the benefits of the river trade without many of the discomforts that now flow from it.

If the choice were absolute between much smoke and no trade we should take the smoke and the trade, but it is quite possible to have the trade without much smoke. The thing desired is to enlarge the trade to its greatest extent, and to reduce the smoke to its least volume. The experiments give hope of a speedy solution of the problem.

### SUNSPOTS AND MAGNETIC DISCHARGES.

In a recent communication to the Academie des Sciences, M. Janssen, the eminent French solar astronomer, stated that he saw nothing in the facts hitherto brought to light to warrant the hypothesis of there being any relation between sunspots and terrestial magnetic disturbances. He was not, however, prepared to dogmatize on the subject, but would prefer that inquiry should be made of foreign meteorologists if at the time of the fine aurora recently observed in America and Europe, magnetic disturbances took place also in the Southern hemisphere. If it were thoroughly ascertained that nothing of the same kind took place in the Southern hemisphere, M. Janssen was of the opinion that we should be in possession of a fact which would render the theory of a solar influence a very improbable one.

### CAPSIZABLE LIFE BOATS.

A special from Coquielle City, Ore., under date of April 13th, states that while the life-saving crew at Bandon were practicing last evening their boat capsized and Capt. Nelson and three of a crew of eight were drowned. The names of two of the drowned crew were William Green and Edward Summers. The third is unknown.

It is generally conceded that our life-saving corps is the best in the world. Why then should the boats with which they are supplied be crank and unfit to do their work?

There has been so much written about self-baling, self-righting non-capsizable life boats that if these merits are contained in any one boat no other ought to be used, and we trust that a searching inquiry will be made by the department to accertain the cause of the life boat on the Oregon station turning turtle at a critical time.

### A NEW BEACON LIGHT.

The German Navigation Society, of Hamburg, having recently tested a new beacon in which the light employed is derived from benzene gas mingled with fine magnesium powder, such as is employed by photographers in flash lamps. The cost of the new light is said to be insignificant, while as regards penetrating power, it is claimed to be even superior to the electric light. Except as regards expense, one does not often hear of electricity being defeated; but it is claimed for the German beacon, which has been designed by Professor Schirm, that it is not only cheaper than any electrical arrangement, but, what is more to the point, it is better adapted to accomplish the desired purpose.

Mr. John R. Pales, of the Pales & Jenks Machine Co., of Pawtucket, R. I., sold his steam yacht Countess last year to Mr. E. H. Bennett, treasurer of the Singer Manufacturing Co., and built the 100 foot steam yacht Harriet. He was very much pleased with the Roberts boiler in the Harriet, which he states has been very satisfactory. Mr. Bennett has been experimenting with heavy forced draft on the Roberts boiler in the Countess and expressed himself as much pleased with the result.

The Lorain schooner St. Lawrence will this year be commanded by Capt. Con Ketchum, the Columbian by Capt. Austin Bullock, the C. H. Burton by Capt. Charles Chilson, the Itasca by Capt. Burtis, and the General Franz Sigel by Capt. Sigel Tear. Capt. Willis Chilson, formerly master of the Itasca, will sail the large schooner Ed Kelley this season.—The Lorain Times.

As there is no prospect of the Bar Point light-ship being engaged for the purpose she has been used for the past number of years, she is being thoroughly overhauled and fitted out for freight purposes at Amherstburg.

### FUTURE DEVELOPMENTS OF STEAMSHIPS.

Professor Henry Dyer gave an interesting article on the race across the Atlantic in a recent number of the "Scottish Review," in which he traces the development of steamships and their machinery, and gives figures to show the increase in speed and efficiency. Professor Dyer traces the dovelopment of the size of steamships from the Great Western up to the present date. He gives figures to show the best runs during that period, and these are brought down to the recent ones of the Teutonic and Majestic. The latest development of the Atlantic race shows a close approximation between the best steamers of the White Star, the Inman, and the Cunard lines, there being only a difference of a few hours in favor of the order in which their names are given, the fastest passages of each varying from 5 days 16 hours 31 minutes to 6 days 2 hours 31 minutes. The Cunard line is thus temporarily a little behind in the race, but a company which has shown such spirit in the past is not likely to give up the contest. Two new steamers, each 600 feet in length, have been ordered, and it is stated that their guaranteed speed is to be 22 knots on the measured mile and 23 knots at sea. This latter speed will enable the passengers across the Atlantic to be accomplished in about 5 days 10 hours. Professor Dyer is of opinion that, as progress has been made by slow and steady steps, this is likely to continue until we have a complete change in the type of ships, of engines, and of boilers. So far as can be seen at present the shape of steam vessels is not likely to be materially altered, as it is substantially the same as that of the Viking's craft of more than a thousand years ago, and seems to conform to the arrangements of nature with regard to fishes, as nearly as the materials at our disposal will admit. It must be remembered that increased speed is not simply a question of more power relatively to displacement, but that each shape of vessel has a speed to which it is specially adapted, and that any attempt to drive it beyond that speed would lead to a great expenditure of power with little useful result, as the energy would be chiefly expended in raising waves. If anything like the present speeds had been attempted with vessels of the size which were common on the Atlantic thirty or forty years ago, the size of engines required, and the extra expenses involved, would have reduced the yearning power of the ships very much, and possibly in many cases made it disappear.

The future development of steamships, depends on conditions about which it is impossible to say anything very definite. The materials of construction have been changed from wood to iron, and from that again to steel. The engines have developed from inverted Watt engines, through a great variety of forms, to multiple-expansion engines of great complexity and considerable efficiency. All these may be rendered useless by some other form of heat engine or by the application of electricity. It is evident, therefore, that the limits of the sizes and speeds of steamships in the future are to be determined by commercial considerations and experience, rather than by abstract scientific speculations.

### THE LAKES SHALL RISE.

BY JOHN A. COPLAND.

Practical Jack was a tug-man bold;
To fight with a gale was "better than gold."
His was a place in the heaviest blow;
It pained him to know that the water was low.
Jack puzzled and pondered the causes to solve,
And finally made a sagacious resolve.
Castor and Pollux, the Polar Star;
A horned Moon, dim Alcor, Mizar;
The rest of the Dipper, Orion too;
Procyon, Sirius and Betelgeuse;
Spica, Arcturus, Aldebaran;
He had them all in his mental plan.
"I've noticed of late," said Captain Jack,
"That the Moon reclines too much on its back.
Could I but manage it up to tip,
We'd soon have of water a goodly sip."
The Moon had nothing to do on Earth,
Astronomers said, with a flood or dearth;
Its only effect was upon the tide—
But Practical Jack took the other side.
He rigged him a vessel to sail the Air;
To tackle the Moon he'd certainly dare.
He took for his crew a bevy of elves
Who over his tug'd disported themselves;
He sailed from the Earth while the Moon was new
Saying that this is what he would do:
He'd cast a line on the lower horn;
His tug would pull till the bight was torn;
And if he success did not achieve,
A tug-man's life he'd forever leave!
His tug lines waiting, with steam at top,
For the other end of the line to drop;
And on and on through the weary days
The crew still steadily Moonward gaze,
For Practical Jack shall soon be seen
Making fast for the grand careen
Which shall raise the lakes with a mighty roar,
And a twenty-foot channel we'll want no more!

Toronto, Canada.

# The Marine Record.

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☞ Subscribers and others are respectfully invited to use the columns of THE MARINE RECORD for the discussion of pertinent topics and all matters relating to the welfare of the Lake Marine. N. B.—We do not hold ourselves responsible in any way for the views expressed by our correspondents. Contributions must in every case be accompanied by the full name and address of the writer, and be at this office not later than Wednesday morning.

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CLEVELAND, O., APRIL 21, 1892.

IT will doubtless gladden the hearts of vessel-owners and captains all over the lakes to learn that at least systematic measures are being taken to make a permanent channel of the proper depth around the mouth of the Cuyahoga river. Col. Jared R. Smith, the United States Engineer, has already made a preliminary survey for the work.

LOCAL TAXATION of boats is just now agitating vessel owners all over the lakes. The matter had got into the Michigan Supreme Court, which recently decided that when residences or offices were taken up in the country for the purpose of securing lower taxation, they must be *bona fide* residences or offices; and that the actual and continual transaction of business in a city while so-called offices in a village are neglected, must be taken as evidence concerning the *bona fide* head-quarters. Nearly all the large Cleveland, Buffalo, and Chicago & Detroit transportation companies are now located outside the cities. The practical outcome of the cases brought to an issue at Detroit will be watched with great interest.

IT IS enough to make one feel dubious about the wisdom of the much-vaunted freedom of the American press to see the reckless publication of such wild and improbable, and, in fact, almost impossible stories, as that given currency this week in reference to J. H. Wade's yacht Wadena, which, so the story went, was reported to be on the bottom of the Mediterranean sea, with all on board. A little investigation would have shown to be utterly false a tale which, besides doing violence to the feelings of the many friends and relatives of those on board, is calculated to injure her builders, particularly when taken in connection with the stories of an injurious nature, which have heretofore been published about the yacht, which is admitted by the experienced navigator to be perfectly staunch and seaworthy.

THE H. R. bill 8,121, introduced last week by Mr. McMillin, reveals an apparent neglect in the outfits of light-house tenders and light-ships, as also in the Revenue Marine service. The bill asks for authority to place a certain number of Caston lights on these departmental vessels. It is, therefore, self-evident that hitherto the special outfit has been neglected. Considering that the Caston light has been for some years past a thoroughly established and well endorsed system of communication in the service of the mercantile marine, on pilot stations, and in the life-saving service, it is somewhat singular that two such important departments as the Light House Board and the Revenue Marine Service should have been without these competent signals of distress. Ordinarily, when pilots or merchantmen would run short of these aids, a light-ship or revenue cutter would naturally be the first place to seek a fresh supply, and for this reason alone an extra supply of the Coston lights should be kept on board these departmental vessels when in service.

## *THE FREIGHT SITUATION.*

The vessel owners of Cleveland, Buffalo and Chicago have been hard pressed all week by the bears, who at almost one fell stroke, have moved the Escanaba ore rate down to 65 cents, from which it has not recovered, although much firmer than a day or two since. A good many charters have been made at that figure in private, and the impression that these boats were still on the market for grain has had the effect of lowering prices at Chicago to an alarming extent, the market slumping suddenly to 1c. per bushel on wheat, corn and oats to Lake Erie ports. This is surprisingly different from the bright prospect for grain carriers held up but a few weeks since. There is little doing in coal. Tonnage has been obtainable for as low as 40 cents to the head of Lake Superior, but the supply is scarce.

## *THE NEW SHIP-OWNERS' ASSOCIATION.*

On Friday last at a meeting in Detroit, well attended by vesselmen from all the lake associations, that the amalgamation of these bodies into one organization would be for the best interests of all concerned. At a meeting to be held at Detroit next Thursday this organization will be completed. The fact that there were too many different bodies organized for practically the same purpose has steadily grown, and while the Lake Carriers' and Vessel Owners' Associations have worked well in the harness together, it has been felt that this imposed an unnecessary burden on those who belonged to both associations and paid dues to each. The proposal of unification met the most hearty approval of all concerned, and an association more powerful and more productive than ever before of good to the lake commerce may be expected.

It might not be out of place to suggest that an entirely new name should be chosen for the new association. If the name of either of the old associations was used, it would be productive of confusion, and it would seem best for many reasons that a new start under a new name should be made. A prominent point at issue in connection with the extensive, and it seems never ending litigation of a certain religious denomination which has been in the courts both here and in Chicago, has been very similar to this, and it would seem the port of wisdom to avoid all annoyances, trivial as they might seem now.

## COMFORTING FOR LAKE SUPERIOR MARINERS.

Lake Superior is a capricious monster, demanding skilled steamships and the use of powerful and staunch boats, the majority of which are comparable with the vessels in our Atlantic coasting trade. The lake is a veritable womb of storms. They develop quickly there and even more speedily, and the water takes on a furious character. It is always cold, and the atmosphere above and far around it is kept cool all summer. I have been told, but cannot verify the statement, that the temperature of the water in the open lake never rises above 6 degrees Fahrenheit. As a rule, the men who sail upon it cannot swim. The lake offers no inducement to learn the art, and, alas! those who are expert swimmers could not keep alive for any great length of time in the icy water. When I was making inquiries upon this point I found, as one almost always does, some who disputed what the majority agreed upon. I even found an old gentleman, a professional man of beyond 70 years of age, who said that for several years he had visited the lakes each summertime, and that he had made it a practice to bathe in its waters nearly every day. It was chilly, he admitted, and he did not stay in very long.

But many sailors, among them some ship and steamship captains confirmed my belief that few Lake Superior seamen had learned to swim, and that this coldness of the water quickly numbs those who fall into it. I asked the captain how long he supposed a man might battle for life or cling to a spar in the lake. He answered, very sensibly, it seems to me that some men could endure the cold longer than others, and that the more flesh and fat a man possessed, the longer he could keep alive. "But" he added, "the only man I ever saw fall overboard went down like a shot before we could get to him. I always supposed he took a cramp."

The bodies of the drowned are said not to rise to the surface. They are refrigerated, and the decomposition which causes the ascent of human bodies in other waters does not take place. If one interesting contribution to my note is true, and there be depths to which fishes do not descend, it is possible that many a hapless sailor man and voyager lies as he died, a century back perhaps, and will ever thus remain life-like and natural under the darkening veil of those emerald depths.—Julian Ralph in Harper's Magazine.

## A CANADIAN MONITOR.

The John Doty Engine Company, of Toronto, are building a steel steamer of the monitor type, which is, however, somewhat different from those being constructed at the Cleveland shipyard. Instead of the cigar-shaped bow of the whalebacks, the boat has a ram how, with a forecastle deck forward, the top sides of which flare outward slightly, something like the mold board of a plow. She is to be fitted with seven self-trimming hatches, the openings being raised about three feet above the top of the rounded deck. The design is by W. E. Redway, superintendent of construction for this company, who claims that his invention is secured by patents in the United States, Canada and foreign countries. The dimensions of the boat are 225 feet length of keel, 38 feet beam, and 20 feet depth of hold. She will be fitted with fore and aft compound engines, having cylinders 28 and 50 inches in diameter, with twelve-inch stroke. She will be supplied with steam from two cylindrical boilers 12x11 feet, and is expected to have a speed af 13 miles on a coal consumption of half a ton per hour. She will register about 850 tons, and have a carrying capacity of about 2,200 tons on a fifteen-foot draft.

## THE STRIKE QUESTION SOLVED.

The difference between doing a thing as it should be done, and varying slightly from the standard, has often proved to be all the difference in the world. Just now it makes Chicago's waterfront a howling center of labor strikes, while Buffalo was never farther from dock disturbances than it is today. Last season Chicago saw a desperate struggle between the line-agents and freight-handlers, only to become the scene of similar strife the moment lake business began this year. So threatening is the attitude of labor 'long shore that the late meeting of vesselmen in Detroit developed any amount of harmony on account of the necessity of acting together.

Buffalo solved the freight-handling problem by allowing the men to do their work by the quantity, instead of by the hour. That is all there is to it. Since the strike of 1884 the big lake lines have, one by one, adopted the idea, till all are now paying wages by the ton of freight handled, so far as wages can be reckoned in that way. This does away with an immense amount of friction. It is a rule which ought to be applied to every branch of labor, so far as possible. The eight hour law would be a dead letter then, and the workman who soldiers would be out of favor with his fellows. Chicago refuses to profit by this wise example, and seems likely to remain the center of disturbance.—*Buffalo Express.*

## SOME SPEED-MAKERS.

Some curious facts are brought into prominence by a correspondent of Cycling, who has been at the pains to draw up a comparative table of the rates of speed in different modes of locomotion. The express train, of course stands preeminent. Man has, as yet, discovered no way of getting about faster on the earth's surface. It will be a surprise, however, to many to learn that the safety bicycle, of which so much is heard nowadays, only occupies in this list the seventh place.

The fastest time in which a train has been known to travel a mile was forty-nine seconds and a fraction; to accomplish the same distance the fastest bicyclist who has hitherto ridden took 2 3-4 minutes, or just about three times as long. An ice yacht has travelled a mile in 1 minute 10 seconds, a running horse in 1 minute 35 1-2 seconds, a torpedo boat in 1 minute 50 seconds, a steam yacht in 2 minutes 12 seconds and a fraction, and a skater on ice, with a favorable wind behind him, in 2 minutes and 12 seconds, and rather a large fraction. A little way after the safety bicycle comes the ocean liner: the oarsman is much slower, taking 5 minutes 40 seconds to travel a mile, and the slowest of all is the swimmer, who requires very little short of an hour to perform the same journey.

## DULUTH'S FLEET GET THROUGH THE ICE.

*Special Telegram to The Marine Record.*

DULUTH April 21.—Last night every vessel in port except City of London made attempt to get through ice. This, a. m., all had succeeded and are away. Two tugs are at outer edge of ice floe and arrivals from below expected tonight.

## THE ERIE CANAL COMPANY.

ALBANY, April 21.—The report of ex-State Engineer John Bogart was presented to the Legislature today. It outlines the method of improvement of the canals of the State adopted by recent statutes, and which is in progress, although interrupted to a considerable extent by the failure of appropriations.

The improvement, as far as the Erie Canal is concerned, will give a full depth of water of seven feet at all points; that standard depth not at present existing at many points on account of deposits of mud and silt washed into the canal. It also contemplates making the locks twice their present leugth, so that two canal boats may pass without being uncoupled. All the important traffic on the canal is now carried in what are called "double headers," two boats connected together, which method secures a large economy in transportation.

## IMPORTANCE OF BILLS OF LADING.

Bills of Lading are often looked upon as a mere matter of form, and being handled daily are often treated in a careless manner. The result of a little inattendance to this matter is most strikingly shown in the case of the S. S. "West Indian," at Acajutla on the Pacific Coast. In commenting upon the case the Pacific Coast Marine Record says:

The loss of the steamer West Indian, at Acajutla, and the anticipated refusal of the underwriters on the cargo to recognize any liability for its loss, prompts us to point out at this time to skippers and merchants the importance of seeing that their bills of lading are always properly made out, and that the voyage as described in their policies of insurance agrees with the bill of lading in every respect. We venture the assertion that few, if any merchants have considered the fact when insuring, that if there is any deviation from the natural or customary course from the voyage the underwriters are at once relieved from all liability, even though the cause of lost should be entirely foreign and apart from the deviation. It is an implied warranty of every contract of voyage insurance that the vessel shall take the port or ports, if more than one in the customary manner, or, in the absence of custom in the most natural manner. In the case of the West Indian we understand that the captain called at Champerico and found that he would be unable to discharge his cargo for several days; he then decided to proceed down the coast, discharge the cargo destined for the lower ports and deliver the Champerico cargo on the way up. The vessel was lost before returning to Champerico. This is to our minds a clear and voluntary deviation on the part of the captain and absolutely frees the cargo under writers from any loss.

Arnold, an eminent English authority says: "In every contract of insurance by means of a voyage policy, the meaning of the parties is taken in law to be that the assured shall have the protection of the policy only so long as he strictly pursued this prescribed course of the voyage insured from beginning to end throughout with all safe convenient and practicable expedition. It is only on this condition, never expressed, but universally implied, that the underwriter agrees to indemnify the assured. Any failure, therefore, to comply with it alters the nature of the risk which the underwriter had assumed and from that moment frees him from liability for subsequent loss. * * * As a general rule, therefore, where there are several ports of discharge, the ship must take them either in the order in which they are named in the policy or, if not named, then in the geographical order of their distance from the port of departure, but if long and uniform usage has established a different order, there can be little doubt that the other may be discarded and this observed."

From this it can be seen that too much care cannot be exercised by shippers in this matter, and the feeling of security so often expresed by the words, "That is none of my business, the insurance companies are bound to look after it," is based upon ignorance of the law, and frequently leads to litigation which might have been avoided had both parties to the contract fully understood their respective rights and duties.

If the voyage, as described in the policy of insurance, does not agree with that in the bill of lading, and the vessel should make a deviation permitted in the latter but not in the former, the loss falls entirely upon the cargo-owners. If, on the other hand, the vessel used a port not named in the bill of lading, or there be any change in voyage in the nature of a deviation, the owner of the vessel is held under the law to be solely and entirely liable.

## WESTERN GRAIN SHIPPERS PAY THE BILLS.

Every year the elevator question becomes a serious one to the grain shippers, and there seems to be no way to escape from the existing conditions. A recent article in the Commercial Advertiser, New York, gives some pointed facts:

"The importance of the Erie Canal as a regulator of grain rates from the lakes to the seaboard cannot be overestimated. During the canal season, over 100,000,000 bushels of grain are transported from the lake ports to New York, Philadelphia and Baltimore over the canal and the railroads. The free competition of the canal boatmen not only fixes the rate of freight on the canal but also upon the railroads. The grain trade follows the channel of least resistance. The railroads must, therefore, meet the canal rate or lose the traffic. This applies not merely to the lines running to New York, but also to those having terminals at Philadelphia and Baltimore. Since the canal rate is from 3 cents to 4 cents per bushel lower than the published rates of the railroads, the competition of the canal effects a saving in the cost of transporting our cereal crops of from $3,000,000 to $4,000,000 yearly.

Not only have the railroads done all they could to prejudice the farmers of the State against the canal, but by their control over the elevators at Bufialo and New York, they subject the boatmen to all conceivable petty annoyances.

All the grain elevators at Buffalo are in a pool. Out of forty-four elevators which are able to handle canal grain, only twenty-six were kept in operation last year. The others were built expressly for transfer of grain from vessels to canal boats This pool has absolute control. It charges five-eighths of a cent per bushel for elevating grain from the lake vessels to the canal boats. To this revenue it adds one-fourth of a cent per bushel for storage, whether the grain is stored or not, two-tenths of a cent per bushel for the use of the steam shovel, and one-eighth of a cent for cleaning—a total charge of 1.2 cents per bushel. This charge is equal to one-third of the average cost of freight on wheat from Buffalo to New York in the season of 1891. The enormous profits made by this pool can be easily shown. The items in the case of an elevator capable of transferring 275,000 bushels per day are as follows:

| | |
|---|---|
| Elevating at 5-8 cent | $1,718.75 |
| Storage at 1-4 cent | 687.50 |
| Use of steam shovel at .2 cent | 550.00 |
| Cleaning at 1-8 cent | 343.75 |
| Total | $3,300.00 |

The total cost to the elevator for labor, etc., for transferring 100,000 of wheat is $44, On 275,000 bushels the cost is $121. The daily profit is therefore $3,179. In spite of the fact that the time during which the greater part of the grain is in store is only a few hours, the storage charge of one-fourth of a cent is always exacted. It is not surprising, therefore, that the elevator pool was able last year to make a profit of over 25 per cent., in spite of the fact that only a few elevators were used. During the last few days of canal navigation the railroad elevators absolutely refused to transfer grain to the canal, in order that it might be held back for railroad transportation. Elevators are in the category of common carriers, and should therefore be restricted to the charge of reasonable rates.

## FLOTSAM JETSAM AND LAGAN.

Insurance rates on grain from Chicago have been adopted as follows: To Lake Michigan ports, 30 cents; to Lake Superior ports, 50 cents; to Port Huron, Sarnia and Detroit river ports, 40 cents; to Georgian Bay ports, 50 cents; to Buffalo and Lake Erie ports, 50 cents; to Lake Ontario, 60 cents; to Ogdensburg, 65 cents; to Montreal, 75 cents.

Over $15,000 has been spent on the propeller H. D. Coffinberrry in repairs.

The propeller Cuba is to go into the Lackawanna Line. The charter was closed Monday.

The Western Transact Liner Chicago struck at the Limekilns Saturday on her way down. She broowed several plants, and had to lighter considerable of her cargo before she could be released. The accident occurred, the Capt. says, by an up bound boat crowding him in the East shore.

Many a stranded ship would be afloat today had the following been indelibly fixed in the minds of their masters: "It must always be borne in mind that there is no compass, however, perfect in manufacture, but needs constant and vigilant watchfulness in determining its errors on every possible occasion."

An Iowa inventor has undertaken to build a steamer that can carry a cargo from the river towns of the upper Mississippi to the sea and thence across the ocean to any part of the world. He has raised his money, but the new craft hasn't made her first trip across the Gulf of Mexico or the larger pond beyond. Until she returns safely on her first round trip, her voyages may be classed with those of Sinbad the sailor.

During the fiscal year ending June 30, 1861, they were shipped from Marbelia to the United States 58,503 tons of ore. This was possible only because of the way low rates of wage ruling in that district, miners earning but 40 to 50 cents a day, while 60 cents a day is "considered an extraordinary good price."

The editor of a new paper in Charles City, Ia., offers his publication free for one year to any man who says he is too poor to pay for it, "providing the applicant neither chews, smokes, drinks, or keeps a dog." At last reports he had not yet got a single subscriber on the terms offered.

## THE UGANDA NEARLY COMPLETED.

*Special Correspondence to The Marine Record.*

BAY CITY, MICH.—Frank VanLiew and John Robertson of Port Huron, Government Inspectors, were in the city last week.

The steambarge Burlington has received a new coat of paint.

A branch of the Seamen's Union was organized here this week with a membership of 38. Temporary officers were elected and the meeting adjourned to meet at the call of the district organizer, when a schedule of wages will be adopted.

The steambarge R. C. Brittain was the first arrival of the lower lakes. She came in on the morning of the 15th with a cargo of 175 tons of coal for B. Boutell.

Bousfield Bros.' elegant steem yacht the Outing, which was lengthened twelve feet during the past winter, was launched again last week. She is a beauty. Her length over all is 60 feet. Her cost is about $11,000.

Whittemore & Maxon's new machine shop for the manufacture of their steering apparatus is nearly ready for business. They have recently purchased the machinery and foundry outfit of a shop at Big Rapids, Mich. With it they got one of the most complete sets of patterns to be found anywhere, and include everything from a small cog wheel pattern to that of an engine.

F. W. Wheeler & Co.'s yard is a very busy institution at present. Everything is working just as smoothly as though there had not been a strike within a thousand miles of it. The barge Mariner of Saginaw is in the dry dock being recaulked. Work is progressing finely on the large wooden steamer being built for Capt. A. E. Stewart and others of Detroit. She will be a duplicate of the Uganda. The Uganda is receiving the finishing touches, and will probably get away Saturday. Her first cargo will be wheat from Duluth to Buffalo. Capt. C. H. Wilson of Erie, Pa. will command her. She is simply superb, her officers quarters, the dining room and kitchen are finished and fitted out in elegant style and undoubtedly are the finest of any freight boat on the lakes. A large schooner for Fitzpatrick of Cleveland is assuming magnificent proportions. She will be a consort of the Geo. T. Hope and will have a capacity for 2,000 tons. In the steel yard a large force of men are at work on the four lightships being built for the Government, also on the mammoth steel steamer being built for the Hollister Transportation Co. of Tonawanda, N. Y. She is 346 feet long, 42 feet wide and will have a capacity of 3,500 tons. It is expected she will be ready to launch in June.

J. P. R.

## NEWS FROM KINGSTON.

*Special Correspondence to The Marine Record.*

Capt. May, of Quebec, recently appointed to the command of the cruiser Constance, will be in Owen Sound on the 28th inst, when her trial trip will take place. If the trial be satisfactory the vessel will be taken over by the Customs Department on May 1st, and will at once leave for the lower St. Lawrence, where she will cruise as a revenue cutter. In addition to the master, the Constance will be manned by two officers, six seamen, two engineers, two stokers, steward and cook. The Constance is 125 ft. long, 19 ft. 6 in. beam, 11 ft. 3 in. deep. Her engine is a compound vertical, 18 and 36 by 24 stroke; boiler, 10 ft. 9 in. by 10 ft. 6 in., to carry a pressure of 110 lbs.; guaranteed speed, 15 miles per hour.

The second cruiser being built by the Polsons for the Dominion Government is of the same dimensions as the Constance. She will be named the Curlew and is intended for the fishery service in the Bay of Fundy. She is about ready for her machinery and will be launched the latter part of May. The third cruiser for which they have received the contract is of about the same dimensions as the other, but is two feet more beam. They have not made any start on the contract yet and will not do so untill the Curlew is launched. She will be used in Georgian Bay to look after the fisheries.

MAGNET.

## INTERESTING GOSSIP FROM ESCANABA.

*Special Correspondence to The Marine Record.*

The steamer Lotus, of the Burns Transportation Company, arrived from Manitowoc Friday, and commenced her season's work with the usual bright prospects. She has been thoroughly caulked from the water line up, and with other repairs, repainting and general overhauling, she presents a bright appearance. Captain Dan Norton has assumed command, anp with Mr. S. H. Talbot, as purser, the travelling public may rest assured of splendid treatment.

Captain Ed. Coffey's tug Daisy Moore, of Manistique, was here a portion of last week, being one of the early arrivals. She will engage in the fishing trade this season.

Start's Green Bay-Cheboygan Liner, Fannie C. Hart, was in Sunday. The E. C. Hart will be out in a few days, and they will operate the same as last season. The steamer Northerner, of Ward's Line, left for a load at Gladstone Saturday. Messrs. Greenwood & Allen, the popular steam-fitters, have been busy with her pipes for some time. They have also assisted materially in the fitting out of the V. Swain. The Schooner Thos. P. Sheldon is not yet fitted out, as also the Helretia.

The schooners A. C. Maxwell and S. J. Tilden, towing with the steamer Ogemaw, which sunk off Burnt Bluff last fall, are yet lying in wait for a tow. They, with the R. B. Hays, which lost her fore-topmast, main-top and bow-sprit in the same blow, have been loaded all winter.

The little steamer Truscott, which, it seems, belongs to n one, has sunk at her winter moorings.

The splendid steamer Maryland, of the I. O. T. Company's Line, led the entire fleet into our port last Sunday. This company's boats, when all in a line, presents quite an unusually pretty sight, and general manager, J. C. Rickertson, whose genial countenance shone out from the port bow of the flagship, can justly be proud of such a fleet.

UNO.

ORGANIZED 1881.

# Michigan Fire and Marine Insurance Co.,

DETROIT, MICH.

| | |
|---|---|
| CAPITAL, - - - | $ 400,000 |
| ASSETS, - - - | 900,000 |
| LOSSES PAID, over - - | 1,500,000 |

D. WHITNEY, JR. PRESIDENT. EUGENE HARBECK, SECRETARY.

This Company will transact a Hull and Cargo business on the Lakes during the season of 1892.

LOSSES PROMPTLY PAID. INSURE IN A STRONG HOME COMPANY.

MARINE AND INLAND INSURANCE.

# Atlantic Mutual Insurance Company,

(ORGANIZED 1842.)

**Office, 51 Wall Street, NEW YORK.**

INSURES AGAINST MARINE AND INLAND TRANSPORTATION RISKS AND WILL ISSUE POLICIES MAKING LOSS PAYABLE IN ENGLAND.

**Assets over $10,000,000.00, for the Security of its Policies.**

The profits of the Company revert to the assured, and are divided annually upon the premiums terminated during the year; thereby reducing the cost of insurance. For such dividends, certificates are issued bearing interest until ordered to be redeemed, in accordance with the charter.

J. D. JONES, Prest. W. H. H. MOORE, Vice-Prest. A. A. RAVEN, 2nd Vice-Prest. J. H. CHAPMAN, Secy.

F. P. BUDDEN, President. W. E. VOLZ, Secretary & Treasurer.

## SOUTH BROOKLYN STEAM ENGINE WORKS.

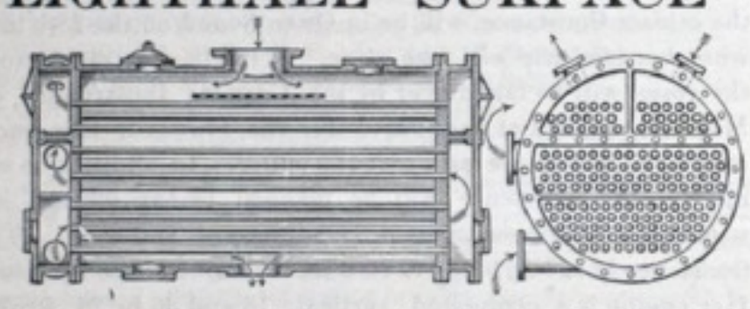
SUCCESSORS TO WILLIAM A. LIGHTHALL. VAN BRUNT & SUMMIT STREETS,

## LIGHTHALL SURFACE CONDENSERS.

BROOKLYN, N. Y.

BUILDERS OF THE

Pat. Combined Surface Condenser and Feed Water Heater.



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Builders of Brass and Composition Surface Condensers for U. S. Cruisers MAINE, No. 11, Gunboats Nos. 5 & 6, CONCORD and BENNINGTON and HARBOR DEFENCE RAM.

# H. B. & G. B. BURGER,

## SHIP-BUILDERS & CONTRACTORS.

### MANITOWOC DRY DOCK.

Dry Dock will admit Vessels of 1100 tons drawing 12 feet. Have also a set of Boxes in connection with the Shipyard capable of lifting Vessels of 350 tons. A large stock of SPARS constantly on hand. LARGE SPAR DERRICK.

**Vessels Docked and Repaired on Reasonable Terms.**

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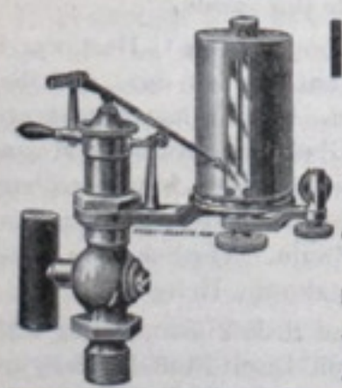

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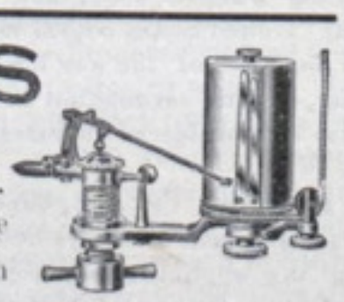

HINE & ROBERTSON, 60 Cortlandt St. NEW YORK.

# Insurance Company of North America.

INCORPORATED 1794.

| | |
|---|---|
| CAPITAL, PAID UP IN CASH, - | $3,000,000.00 |
| ASSETS. - - - - - | $9,273,220.00 |

CHARLES PLATT, President. WILLIAM A. PLATT, Vice-President.
EUGENE L. ELLISON, 2nd Vice-President. GREVILLE E. FRYER, Sec'y & Treas.
JOHN H. ATWOOD, Assistant Secretary.

## LAKE MARINE DEPARTMENT.

GEORGE L. McCURDY, MANAGER. CHICAGO, ILLS

CAPITAL, $300,000.

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**INCORPORATED IN 1891 UNDER STATE LAW.**

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DIRECTORS.

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| W. B. HALE, Cashier. | MARTYN BONNELL. | THOS. H. WHITE. |

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We promise to make every effort to make our Bank a safe, agreeable and profitable place to do business.

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Wheeler "Admiralty" Condenser,

WITH PATENT SCREW GLANDS,

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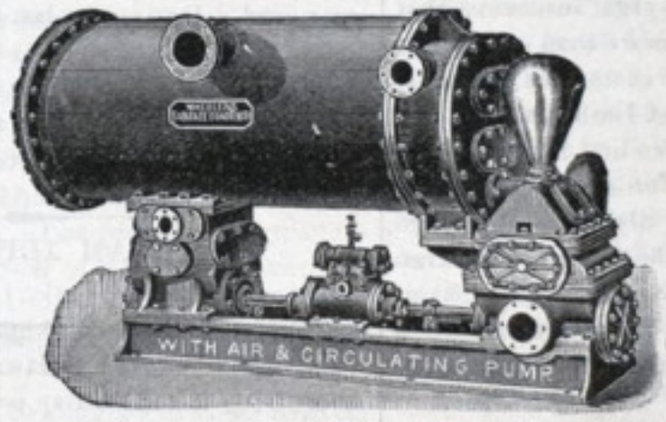
With Patent Waterproof Packing.

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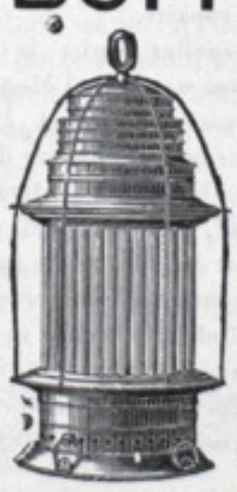

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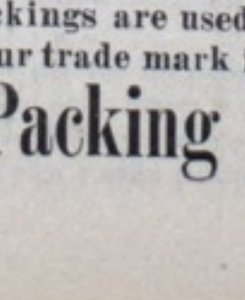

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